

Message

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**From:** Hamilton, Scott [hamilton.scott@epa.gov]  
**Sent:** 6/14/2018 4:39:05 PM  
**To:** Coughlin, Justin [coughlin.justin@epa.gov]  
**Subject:** FW: Duvas O2  
**Attachments:** Volker et al 1998.pdf

Scott Hamilton  
Air Monitoring and Analysis Section  
Air and Radiation Division  
U.S. Environmental Protection Agency  
Phone: 312-353-4775

Mailing Address:  
USEPA Region 5  
Scott Hamilton (AT-18J)  
77 W Jackson Blvd  
Chicago, IL 60604

-----Original Message-----

From: Secrest, Cary  
Sent: Thursday, June 14, 2018 10:55 AM  
To: Hamilton, Scott <hamilton.scott@epa.gov>  
Subject: RE: Duvas O2

ENFORCEMENT CONFIDENTIAL

Mr. Cary Secrest  
EPA Office of Enforcement and Compliance Assurance Air Enforcement Division WJ Clinton Bldg, South, Rm. 2111A  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004

Office: (202) 564-8661

"Be yourself. Everyone else is already taken." Oscar Wilde

-----Original Message-----

From: Hamilton, Scott  
Sent: Thursday, June 14, 2018 11:33 AM  
To: Secrest, Cary <Secrest.Cary@epa.gov>  
Subject: RE: Duvas

It's very strange because even the file that comes from the onboard computer (directly from the DUVAS thumb drive) does not have O2 reported?

We received this unit last August and here is the very first data that was written to the thumb drive. No O2 reported.

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-----Original Message-----

From: Secrest, Cary  
Sent: Thursday, June 14, 2018 9:51 AM  
To: Hamilton, Scott <hamilton.scott@epa.gov>  
Subject: RE: Duvas

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I finished looking at the spreadsheet. There's nothing to indicate a malfunction, but the absence of O2 is odd if you had it clicked on.

I noticed once that data wasn't logged for a gas that I clicked on but did not "Save Configuration."

Negative concentrations usually indicate an interfering gas.

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-----Original Message-----

From: Hamilton, Scott  
Sent: Thursday, June 14, 2018 8:32 AM  
To: Secrest, Cary <Secrest.Cary@epa.gov>  
Subject: RE: Duvas

I'm going to have to look into that. We should have had O2 on I just don't see it in the datalog spreadsheet.

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-----Original Message-----

From: Secrest, Cary  
Sent: Wednesday, June 13, 2018 3:45 PM  
To: Hamilton, Scott <hamilton.scott@epa.gov>  
Subject: RE: Duvas

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Scott, it appears that O2 was not activated.

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-----Original Message-----

From: Hamilton, Scott  
Sent: Wednesday, June 13, 2018 4:19 PM  
To: Secrest, Cary <Secrest.Cary@epa.gov>  
Subject: RE: Duvas

On its way. 15MB so might take a min

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Chicago, IL 60604

-----Original Message-----

From: Secrest, Cary  
Sent: Wednesday, June 13, 2018 3:13 PM  
To: Hamilton, Scott <hamilton.scott@epa.gov>  
Subject: RE: Duvas

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Hi Scott:

This Excel online is driving me crazy. Can you send me the excel file?

Mr. Cary Secrest  
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1200 Pennsylvania Avenue, N.W.  
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-----Original Message-----

From: Hamilton, Scott  
Sent: Wednesday, June 13, 2018 2:24 PM  
To: Secrest, Cary <Secrest.Cary@epa.gov>  
Subject: RE: Duvas

This is one file we have. What do you think? See this link: [https://usepa-my.sharepoint.com/:x:/r/personal/hamilton\\_scott\\_epa\\_gov/Documents/GMAP/Data%20and%20Project%20Info/2018/Middletown%20and%20Chillicothe%20OH/1805\\_MIDDLETOWNOH\\_2/2018-05-23-Datalog.csv?d=w9d4241adc100409183648318584f573d&csf=1&e=hqKeEd](https://usepa-my.sharepoint.com/:x:/r/personal/hamilton_scott_epa_gov/Documents/GMAP/Data%20and%20Project%20Info/2018/Middletown%20and%20Chillicothe%20OH/1805_MIDDLETOWNOH_2/2018-05-23-Datalog.csv?d=w9d4241adc100409183648318584f573d&csf=1&e=hqKeEd)

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-----Original Message-----

From: Secrest, Cary  
Sent: Wednesday, June 13, 2018 12:32 PM  
To: Hamilton, Scott <hamilton.scott@epa.gov>; Thoma, Eben <Thoma.Eben@epa.gov>  
Cc: Whipple, Wayne <whipple.wayne@epa.gov>; Coughlin, Justin <coughlin.justin@epa.gov>; Fuoco, Marta <fuoco.marta@epa.gov>  
Subject: Duvas

Scott:

ED\_002767E\_00000175

The Raw data files (one each second) have the x,y's for the spectra and perhaps comparing the measurements with the cal might be useful to see if the measured spectra indicates an interference.

The other approach, one that I would take, would be to look at the column to the right of the benzene concentration, which is the signal to noise ratio, which I expect would become quite high with an interference (the SNR indicates the fitting agreement between the measured spectrum and the library spectrum).

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-----Original Message-----

From: Hamilton, Scott  
Sent: Wednesday, June 13, 2018 1:09 PM  
To: Thoma, Eben <Thoma.Eben@epa.gov>  
Cc: Secrest, Cary <Secrest.Cary@epa.gov>; Whipple, Wayne <whipple.wayne@epa.gov>; Coughlin, Justin <coughlin.justin@epa.gov>; Fuoco, Marta <fuoco.marta@epa.gov>  
Subject: RE: Sorry for confusion on the time

This is Justin's comparison data.

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-----Original Message-----

From: Thoma, Eben  
Sent: Wednesday, June 13, 2018 11:53 AM  
To: Hamilton, Scott <hamilton.scott@epa.gov>  
Cc: Secrest, Cary <Secrest.Cary@epa.gov>; Whipple, Wayne <whipple.wayne@epa.gov>; Coughlin, Justin <coughlin.justin@epa.gov>  
Subject: Re: Sorry for confusion on the time

Oh, and can you resend the Excel file? I thought I saw one attached to the meeting invite but it disappeared when I reject s the invite.

Thanks,

Eben

Sent from my iPhone

> On Jun 13, 2018, at 12:32 PM, Thoma, Eben <Thoma.Eben@epa.gov> wrote:

>

> Sorry, didn't finish thought (at the docs with a tweaked back)

>

> Anyway, if just open the raw spectra in with out background subtraction it may be hard to see the benzene spectral features. You can try do background sub in excell but you will need two spectra relatively closes in time (with and withou benzene, ratio then.

>

> In general it would be good to have the benzene reference spectra from the DUVAS a couple of the cal spectra (100ppb) a couple field spectra near the same level as the cal (100ppb) and then an assortment of the higher reading spectra to compare.

>

> Eben

>

> Sent from my iPhone

>

>> On Jun 13, 2018, at 12:22 PM, Thoma, Eben <Thoma.Eben@epa.gov> wrote:

>>  
>> Thanks Scott.  
>>  
>> First off ideally you want to use the DUVAS software to reprocess the data so you can see resultant absorbable spectra. I can't recall how to do that exactly but should be possible. Do you have the DUVAS software installed on your desk pc (with the dongle)? If not, I can see how that would be harder to do from the field unit.  
>>  
>>  
>>  
>> Sent from my iPhone  
>>  
>>> On Jun 13, 2018, at 12:15 PM, Hamilton, Scott <hamilton.scott@epa.gov> wrote:  
>>>  
>>> No problem at all.  
>>>  
>>> I can plot them in excel but I'm still not too sure what I am looking for as far as differences between the two (calibration gas versus field measurement) plots.  
>>>  
>>> Scott Hamilton  
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>>> Air and Radiation Division  
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>>> -----Original Message-----  
>>> From: Thoma, Eben  
>>> Sent: Wednesday, June 13, 2018 11:09 AM  
>>> To: Hamilton, Scott <hamilton.scott@epa.gov>  
>>> Cc: Secrest, Cary <Secrest.Cary@epa.gov>  
>>> Subject: Sorry for confusion on the time  
>>>  
>>> Scott, sorry I can't make the call tomorrow at 10:00 am. As suggested, I would pick-out several spectra to take a look at the benzene spectral signal in comparison to the cal signal.  
>>>  
>>> Cary, it I have been a while since I used the DUVAS. And don't have the software installed. Is it easy to read in and process fields spectra and set the background file?  
>>>  
>>> Just suggesting a reality check on a range of the spectra.  
>>>  
>>> Thanks,  
>>>  
>>> Eben  
>>>  
>>> Sent from my iPhone